

CLAIMS

What is Claimed is:

- 1           1.     A television system comprising:  
2           a receiver for receiving broadcast television content;  
3           means for inserting receiver identification data into data representing the  
4     television content; and  
5           means for generating a display of television images based upon the data  
6     representing the television content and the receiver identification data.
- 1           2.     The television system of Claim 1, wherein the receiver identification data  
2     includes at least one of a receiver serial number, a name of an owner of the receiver, an  
3     address of an owner of the receiver, a phone number of an owner of the receiver, a name  
4     of a manufacturer of the receiver and a model name of the receiver.
- 1           3.     The television system of Claim 1, wherein the receiver identification data  
2     includes a date stamp representing the date on which the receiver identification data was  
3     inserted into the data representing the television content.
- 1           4.     The television system of Claim 1, wherein the receiver identification data  
2     includes a time stamp representing the time at which the receiver identification data was  
3     inserted into the data representing the television content.
- 1           5.     The television system of Claim 1, further comprising a removable access  
2     card that stores television channel access data and billing data, and wherein the receiver  
3     identification data is obtained from the removable access card.
- 1           6.     The television system of Claim 1, wherein the receiver identification data  
2     is inserted into the data representing the television content by modifying saturation data  
3     of the television content.

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1           7.       The television system of Claim 1, wherein the television content includes  
2 multiple frames and the receiver identification data is inserted multiple times into data  
3 representing a frame of the television content.

1           8.       The television system of Claim 1, wherein the means for generating a  
2 display of television images generates a display of program guide images, and wherein  
3 the means for inserting inserts receiver identification data into data representing the  
4 program guide images prior to their display.

1           9.       A method of modifying received television content comprising:  
2 receiving broadcast television content with a receiver;  
3 inserting receiver identification data into data representing the television content;  
4 and  
5 generating a display of television images based upon the data representing the  
6 television content and the receiver identification data.

1           10.      The method of Claim 9, wherein the receiver identification data includes at  
2 least one of a receiver serial number, a name of an owner of the receiver, an address of an  
3 owner of the receiver, a phone number of an owner of the receiver, a name of a  
4 manufacturer of the receiver and a model name of the receiver.

1           11.      The method of Claim 9, wherein the receiver identification data includes a  
2 date stamp representing the date on which the receiver identification data was inserted  
3 into the data representing the television content.

1           12.      The method of Claim 9, wherein the receiver identification data includes a  
2 time stamp representing the time at which the receiver identification data was inserted  
3 into the data representing the television content.

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1           13.     The method of Claim 9, wherein the receiver identification data is  
2     obtained from a removable access card that stores television channel access data and  
3     billing data.

1           14.     The method of Claim 9, wherein the receiver identification data is inserted  
2     into the data representing the television content by modifying saturation data of the  
3     television content.

1           15.     The method of Claim 9, wherein the television content includes multiple  
2     frames and the receiver identification data is inserted multiple times into data  
3     representing frame of television content.

1           16.     The method of Claim 9, and further comprising generating a display of  
2     program guide images, and inserting receiver identification data into data representing the  
3     program guide images prior to their display.

1           17.     A receiver for receiving broadcast television content and inserting receiver  
2     identification data into generated images of television content in a manner that is  
3     undetectable to a casual observer of such images, the receiver comprising:

4                 a tuner for receiving a plurality of television channels and outputting a first  
5     television channel;

6                 a buffer coupled to the tuner for storing a first image frame from the first  
7     television channel, the first image frame including a multiplicity of pixel data;

8                 a memory for storing identification data that provides a unique identification of  
9     the receiver;

10                a controller coupled to the buffer and the memory, the controller retrieving  
11     identification data from the memory and changing values of the pixel data to values of the  
12     identification data, the controller thereby embedding the identification data into the first  
13     image frame; and

14                a display generator for generating a display of the first television channel  
15     including the first image frame.

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1           18.     A method of receiving broadcast television content with a receiver and  
2 inserting receiver identification data into generated images of television content in a  
3 manner that is undetectable to a casual observer of such images, the method comprising:  
4           receiving a plurality of television channels with a tuner and outputting a first  
5 television channel;  
6           storing a first image frame from the first television channel, the first image frame  
7 including a multiplicity of pixel data;  
8           storing identification data that provides a unique identification of the receiver;  
9           modifying a subset of the pixel data to represent the identification data, the  
10 identification data thereby being embedded into the first image frame; and  
11           generating a display of the first television channel including the first image frame.

1           19.     A program reception system comprising:  
2           a receiver for receiving transmitted data representing program content;  
3           means for modifying the data representing the program content to include  
4 receiver identification data; and  
5           means for providing the modified data representing the program content to a  
6 presentation device.

1           20.     The apparatus of Claim 19, wherein the receiver identification data is  
2 selected from the group comprising:  
3           a receiver serial number;  
4           a name of an owner of the receiver;  
5           an address of an owner of the receiver;  
6           a phone number of an owner of the receiver;  
7           a name of a manufacturer of the receiver; and  
8           a model name of the receiver.

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21. The apparatus of Claim 19, wherein the receiver identification data includes a date stamp representing a date on which the data representing the program content was modified to include the receiver identification data.

22. The apparatus of Claim 19, wherein the receiver identification data includes a time stamp representing the time at which the data representing the program content was modified to include the receiver identification data.

23. The apparatus of Claim 19, further comprising a removable access card that stores program channel access data and billing data, and wherein the receiver identification data is obtained from the removable access card.

24. The apparatus of Claim 19, wherein the program content includes television content and the receiver identification data is inserted into the data representing the program content by modifying saturation data of the television content.

25. The apparatus of Claim 19, wherein the program content includes television content having multiple frames and the receiver identification data is inserted multiple times into data representing a frame of the television content.

26. The apparatus of Claim 19, wherein the means for providing the modified data representing the program content to a presentation device provides a display of at least one program guide image, and wherein the means for modifying the data representing the program content to include receiver identification data inserts receiver identification data into data representing the program guide image prior to display of the program guide image.

27. A method of modifying received program content comprising:  
receiving broadcast data representing program content;  
modifying the data representing the program content to include receiver  
information data; and  
providing the modified data representing the program content to a presentation  
device.

28. The method of Claim 27, wherein the step of modifying the data representing the program content to include receiver information data comprises the step of substituting receiver identification data for a subset of the data representing the program content.

29. The method of Claim 27, further comprising the step of presenting the modified program content to the user on the presentation device.

30. The method of Claim 27, wherein the receiver identification data is selected from the group comprising:

- a receiver serial number;
- a name of an owner of the receiver;
- an address of an owner of the receiver;
- a phone number of an owner of the receiver;
- a name of a manufacturer of the receiver; and
- a model name of the receiver.

31. The method of Claim 27, wherein the receiver identification data includes a date stamp representing the date on which the receiver identification data was inserted into the data representing the program content.

32. The method of Claim 27, wherein the receiver identification data includes a time stamp representing the time at which the receiver identification data was inserted into the data representing the program content.

1           33.     The method of Claim 27, wherein the receiver identification data is  
2     obtained from a removable access card that stores program channel access data and  
3     billing data.

1           34.     The method of Claim 27, wherein the program content comprises  
2     television content, and the receiver identification data is inserted into the data  
3     representing the program content by modifying saturation data of the television content.

1           35.     The method of Claim 27, wherein the program content comprises  
2     television content including multiple frames and the receiver identification data is  
3     inserted multiple times into data representing frame of television content.

1           36.     The method of Claim 27, further comprising the step of generating a  
2     display of program guide images, and inserting receiver identification data into data  
3     representing the program guide images prior to their display.

1           37.     A receiver for receiving transmitted program content, comprising:  
2     a tuner, for receiving at least one of a plurality of program channels;  
3     a memory, communicatively coupled to the tuner for storing at least a portion of  
4     data representing the program content;  
5     a controller, communicatively coupled to the memory, the controller for  
6     modifying at least a portion of the data representing program content according to  
7     receiver identification data.

1           38.     The receiver of Claim 37, wherein the program content comprises  
2     television content, the portion of data representing the program content comprises pixel  
3     data, and wherein:  
4     the controller modifies at least a portion of the pixel data according to the receiver  
5     identification data.

1           39.    The receiver of Claim 37, further comprising a second memory,  
2   communicatively coupled to the controller, for storing the identification data.

1           40.    The receiver of Claim 37, wherein the identification data is selected from  
2   the group comprising:  
3       a receiver serial number;  
4       a name of an owner of the receiver;  
5       an address of an owner of the receiver;  
6       a phone number of an owner of the receiver;  
7       a name of a manufacturer of the receiver; and  
8       a model name of the receiver.

1           41.    The receiver of Claim 37, wherein the receiver identification data includes  
2   date data representing a date on which the data representing the program content was  
3   modified to include the receiver identification data.

1           42.    The receiver of Claim 37, wherein the receiver identification data includes  
2   time data representing a time at which the data representing the program content was  
3   modified to include the receiver information data.

1           43.    The receiver of Claim 37, wherein the receiver identification data is  
2   obtained from an access card communicatively coupleable with the receiver.

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- 1           44.     An article of manufacture embodying logic for computing a plurality of
- 2 order-based analysis functions for records stored in a table in a computer system
- 3 comprising:
- 4           receiving broadcast data representing program content;
- 5           modifying the data representing the program content to include receiver
- 6 information data; and
- 7           providing the modified data representing the program content to a presentation
- 8 device.

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